IN THE CLAIMS

1. (currently amended) A method for treating acute ~~promyelogenous~~ promyelocytic leukemia in a human subject, comprising:

determining a therapeutically effective dosage of arsenic trioxide based on the weight of a human subject diagnosed with acute promyelocytic~~promyelogenous~~ leukemia; and

administering arsenic trioxide in the determined dosage, for a maximum of 60 days or until bone marrow remission, wherein said administering constitutes a first administration.

2. (original) The method of claim 1, further comprising a second administration of a therapeutically effective amount of arsenic trioxide, for 25 doses.

3. (original) The method of claim 2, wherein said second administration is administered 3 to 6 weeks after said first administration.

4. (original) The method of claim 3, wherein said second administration is administered for up to five weeks.

5. (original) The method of claim 4, wherein said second administration is administered at five doses per week.

6. (original) The method of claim 2, further comprising repeating said second administration.

7. (original) The method of claim 6, wherein said second administration is repeated every 3 to 6 weeks.

8. (original) The method of claim 7, wherein said second administration is repeated until a total of between two and ten cycles of said second administration are completed.

9. (original) The method of claim 8, further comprising repeating said second administration until a total of two cycles of said second administration are completed.

10. (original) The method of claim 8, further comprising repeating said second administration until a total of ten cycles of said second administration are completed.

11. (currently amended) A method for treating acute promyelocytic~~promyelogenous~~ leukemia in a human subject, comprising:

determining a therapeutically effective dosage amount of arsenic trioxide based on the weight of a human subject diagnosed with acute promyelocytic~~promyelogenous~~ leukemia; and

administering arsenic trioxide in the determined dosage amount once a day for a maximum of 60 days or until bone marrow remission, wherein said administering constitutes a first administration.

12. (original) The method of claim 11, further comprising a second administration of a therapeutically effective amount of arsenic trioxide, for 25 doses.

13. (original) The method of claim 12, wherein said second administration is administered 3 to 6 weeks after said first administration.

14. (original) The method of claim 13, wherein said second administration is administered for up to five weeks.

15. (original) The method of claim 14, wherein said second administration is administered at five doses per week.

16. (original) The method of claim 12, further comprising repeating said second administration.

17. (original) The method of claim 16, wherein said second administration is repeated every 3 to 6 weeks.

18. (original) The method of claim 17, wherein said second administration is repeated until a total of between two and ten cycles of said second administration are completed.

19. (original) The method of claim 18, further comprising repeating said second administration until a total of two cycles of said second administration are completed.

20. (original) The method of claim 18, further comprising repeating said second administration until a total of ten cycles of said second administration are completed.